

WHAT IS CLAIMED IS:

1. An optical device comprising:  
an optical member;  
memory means for storing preset velocity  
5 information about driving of said optical member;  
driving means for driving said optical member;  
operation means having an operation member; and  
control means for performing drive control of said  
driving means, wherein said control means performs  
10 preset drive control of said driving means on the basis  
of the preset velocity information stored in said  
memory means, and said control means changes the preset  
velocity information in accordance with an operation of  
said operation member.  
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2. A device according to claim 1, wherein said  
control means sets a change amount of the preset  
velocity information in accordance with an operation  
amount of said operation member of said operation  
20 means.
3. A device according to claim 1, wherein said  
control means sets a change amount of the preset  
velocity information in accordance with an operation  
25 amount of said operation member of said operation means  
and a driving velocity of said optical member in  
operating said operation member.

4. A device according to claim 1, wherein every  
time said operation member of said operation means is  
operated, said control means sets a change amount of  
the preset velocity information in accordance with a  
5 driving velocity of optical adjustment means in the  
operation regardless of an operation amount.

5. A device according to claim 1, wherein  
said memory means stores preset direction  
10 information,

said driving means drives said optical member in  
two directions (backward and forward directions, right  
and left directions, or up and down directions),

said operation member of said operation means has  
15 two operation directions corresponding to the two  
driving directions of said optical member,

said control means performs the preset drive  
control of said driving means to drive said optical  
member on the basis of the preset velocity information  
20 and the preset direction information, and

said control means changes the preset velocity  
information to a high-velocity side when said operation  
member is operated in one of the two operation  
directions, and to a low-velocity side when said  
25 operation member is operated in the other direction.

6. A device according to claim 1, wherein

said memory means stores preset direction  
information,

said driving means drives said optical member in  
two directions (backward and forward directions, right  
5 and left directions, or up and down directions),

said operation member of said operation means has  
two operation directions corresponding to the two  
driving directions of said optical member,

said control means performs the preset drive  
10 control of said driving means to drive said optical  
member on the basis of the preset velocity information  
and the preset direction information, and

said control means changes the preset velocity  
information to a high-velocity side when said operation  
15 member is operated in a direction of the two operation  
directions that corresponds to a current driving  
direction of said optical member, and to a low-velocity  
side when said operation member is operated in a  
direction of the two operation directions that  
20 corresponds to a direction opposite to the current  
driving direction of said optical member.

7. A device according to claim 1, wherein  
said memory means stores preset position  
25 information,

said driving means drives said optical member in two directions (backward and forward directions, right and left directions, or up and down directions),

5       said operation member of said operation means has two operation directions corresponding to the two driving directions of said optical member,

10       said control means performs the preset drive control of said driving means to drive said optical member on the basis of the preset velocity information and the preset position information, and

15       said control means changes the preset velocity information to a high-velocity side when said operation member is operated in one of the two operation directions, and to a low-velocity side when said operation member is operated in the other one of the two operation directions.

20       8. A device according to claim 1, wherein said memory means stores preset position information,

said driving means drives said optical member in two directions (backward and forward directions, right and left directions, or up and down directions),

25       said operation member of said operation means has two operation directions corresponding to the two driving directions of said optical member,

said control means performs the preset drive control of said driving means to drive said optical member on the basis of the preset velocity information and the preset position information, and

5        said control means changes the preset velocity information to a high-velocity side when said operation member is operated in a direction of the two operation directions that corresponds to a current driving direction of said optical member, and to a low-velocity  
10       side when said operation member is operated in a direction of the two operation directions that corresponds to a direction opposite to the current driving direction of said optical member.

15       9. A device according to claim 1, wherein said control means stores and holds, in said memory means, preset velocity information at an end of the preset drive control, and sets the preset velocity information as preset velocity information at a start of next  
20       preset drive control.

10. A device according to claim 1, wherein  
      said memory means stores preset direction information,

25       said control means performs the preset drive control of said driving means to drive said optical

member on the basis of the preset velocity information  
and the preset direction information, and

said control means stores and holds, in said  
memory means, preset velocity information and preset  
5 direction information at an end of the preset drive  
control, and sets the preset velocity information and  
the preset direction information as preset velocity  
information and preset direction information at a start  
of next preset drive control.

10 11. A device according to claim 1, wherein  
said memory means stores preset position  
information,

said control means performs the preset drive  
15 control of said driving means to drive said optical  
member on the basis of the preset velocity information  
and the preset position information, and

said control means stores and holds, in said  
memory means, preset velocity information and preset  
20 position information at an end of the preset drive  
control, and sets the preset velocity information and  
the preset position information as preset velocity  
information and preset position information at a start  
of next preset drive control.

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12. A device according to claim 1, wherein said optical member includes a zoom lens optical system for adjusting a magnification.

5           13. A device according to claim 1, wherein  
            said operation means generates command information for driving said optical member in accordance with the operation of said operation member, and

            when said control means does not perform the  
10     preset drive control, said control means performs drive control of said driving means to drive said optical member on the basis of the command information from said operation means.

15           14. A device according to claim 1, wherein  
            said optical device further comprises storage designation operation means operated to store the preset velocity information in said memory means,

            said operation means generates command information  
20     for driving said optical member in accordance with the operation of said operation member, and

            in accordance with an operation of said storage designation operation means when said control means does not perform the preset drive control and performs  
25     drive control of said driving means to drive said optical member on the basis of the command information from said operation means, said control means stores a

driving velocity of said optical member in the operation as preset velocity information in said memory means.

5           15. A device according to claim 14, wherein  
            said optical device further comprises preset  
driving start operation means operated to generate  
preset drive control start command information, and  
            said control means starts the preset drive control  
10          of said driving means on the basis of the preset  
velocity information stored in said memory means in  
accordance with an operation of said preset driving  
start operation means.

15           16. An optical device driving unit mounted on or  
connected to an optical device main body having an  
optical member, comprising:  
            an optical member;  
            memory means for storing preset velocity  
20          information about driving of said optical member;  
            driving means for driving said optical member;  
            operation means having an operation member; and  
            control means for performing drive control of said  
driving means, wherein said control means performs  
25          preset drive control of said driving means on the basis  
of the preset velocity information stored in said  
memory means, and said control means changes the preset



velocity information in accordance with an operation of said operation member.

17. A camera system having a camera on which an  
5 optical device is mounted, comprising:  
an optical member;  
memory means for storing preset velocity  
information about driving of said optical member;  
driving means for driving said optical member;  
10 operation means having an operation member; and  
control means for performing drive control of said  
driving means, wherein said control means performs  
preset drive control of said driving means on the basis  
of the preset velocity information stored in said  
15 memory means, and said control means changes the preset  
velocity information in accordance with an operation of  
said operation member.

18. An optical device comprising:  
20 an optical member;  
memory means for storing preset direction  
designation information representing a target driving  
direction or target driving position of said optical  
member;  
25 driving means for driving said optical member;  
operation means having an operation member; and

control means for performing drive control of said driving means, wherein said control means performs preset drive control of said driving means on the basis of the preset direction designation information stored in said memory means, and said control means changes the preset direction designation information and a driving direction of said optical member in accordance with an operation of said operation member.

10           19. A device according to claim 18, wherein  
              said memory means further stores preset driving velocity information, and  
              said control means performs the preset drive control of said driving means on the basis of the  
15           preset direction designation information and the preset driving velocity information that are stored in said memory means.

20           20. A device according to claim 18, wherein  
              said driving means drives said optical member in two directions,  
              said operation member of said operation means has two operation directions corresponding to the two driving directions of said optical member, and  
25           said control means changes the preset direction designation information when said operation member is operated in a direction of the two operation directions

that corresponds to a current driving direction of said optical member.

21. A device according to claim 18, wherein  
5       said operation means generates command information for driving said optical member in accordance with the operation of said operation member, and

10       when said control means does not perform the preset drive control, said control means performs drive control of said driving means to drive said optical member on the basis of the command information from said operation means.

22. A device according to claim 18, wherein  
15       said operation means generates command information including at least driving direction information of said optical member in accordance with the operation of said operation member, and

20       when said control means performs the preset drive control, said control means changes the preset direction designation information on the basis of the driving direction information of the command information from said operation means.

23. An optical device comprising:  
25       an optical member;

memory means for storing preset direction designation information representing a target driving direction or target driving position of said optical member;

5 driving means for driving said optical member;  
control means for performing drive control of said driving means; and

preset driving start operation means operated to start preset drive control,

10 wherein said control means performs (starts) preset drive control of said driving means on the basis of the preset direction designation information stored in said memory means in accordance with an operation of said preset driving start operation means, and said  
15 control means changes the preset direction designation information and a driving direction of said optical member in accordance with the operation of said preset driving start operation means during the preset drive control.

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24. A device according to claim 23, wherein  
said optical device further comprises driving command operation means for generating command information for driving said optical member in  
25 accordance with an operation of an operation member,  
and

said control means starts the preset drive control in accordance with the operation of said preset driving start operation means, changes and sets the preset direction designation information in accordance with the operation of said preset driving start operation means during the preset drive control, and ends the preset drive control in accordance with an operation of said driving command operation means during the preset drive control.

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25. A device according to claim 18, wherein said control means stores and holds preset direction designation information at an end of the preset drive control, and sets the preset direction designation information as preset direction designation information at a start of next preset drive control.

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26. A device according to claim 23, wherein said control means stores and holds preset direction designation information at an end of the preset drive control, and sets the preset direction designation information as preset direction designation information at a start of next preset drive control.

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27. A device according to claim 19, wherein said control means stores and holds preset direction designation information and preset velocity information

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at an end of the preset drive control, and sets the  
preset direction designation information and the preset  
velocity information as preset direction designation  
information and preset velocity information at a start  
5 of next preset drive control.

28. A device according to claim 21, wherein  
said optical device further comprises storage  
command operation means operated to store the preset  
10 direction designation information in said memory means,  
and

in accordance with an operation of said storage  
command operation means when drive control of said  
driving means for driving said optical member is  
15 performed on the basis of the command information from  
said operation means, said control means stores preset  
direction designation information corresponding to a  
driving direction or driving position in the operation.

29. A device according to claim 28, wherein  
said memory means further stores preset driving  
velocity information, and

in accordance with the operation of said storage  
command operation means when drive control of said  
25 driving means for driving said optical member is  
performed on the basis of the command information from  
said operation means, said control means stores preset

direction designation information corresponding to a driving direction or driving position and preset velocity information corresponding to a driving velocity in the operation.

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30. A device according to claim 18, further comprising indication means for indicating a driving direction of optical adjustment means that corresponds to the preset direction designation information.

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31. A device according to claim 23, further comprising indication means for indicating a driving direction of optical adjustment means that corresponds to the preset direction designation information.

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32. A device according to claim 19, further comprising indication means for indicating a driving velocity of optical adjustment means that corresponds to the preset velocity information.

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33. A device according to claim 18, wherein said optical member includes a zoom lens optical system for adjusting a magnification.

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34. A camera system having a camera on which an optical device is mounted, comprising:

an optical member;

memory means for storing preset direction designation information representing a target driving direction or target driving position of said optical member;

5 driving means for driving said optical member;  
operation means having an operation member; and  
control means for performing drive control of said driving means, wherein said control means performs  
preset drive control of said driving means on the basis  
10 of the preset direction designation information stored  
in said memory means, and said control means changes  
the preset direction designation information and a  
driving direction of said optical member in accordance  
with an operation of said operation member.

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35. A camera system having a camera on which an optical device is mounted, comprising:

an optical member;

memory means for storing preset direction  
20 designation information representing a target driving  
direction or target driving position of said optical  
member;

driving means for driving said optical member;

control means for performing drive control of said  
25 driving means; and

preset driving start operation means operated to  
start preset drive control,



wherein said control means performs (starts)  
preset drive control of said driving means on the basis  
of the preset direction designation information stored  
in said memory means in accordance with an operation of  
5 said preset driving start operation means, and

said control means changes the preset direction  
designation information and a driving direction of said  
optical member in accordance with the operation of said  
preset driving start operation means during the preset  
10 drive control.

36. An optical device comprising:

an optical member;  
memory means for storing preset driving  
15 information about driving of said optical member;  
driving means for driving said optical member;  
operation means having an operation member; and  
control means for performing drive control of said  
driving means, wherein said control means changes the  
20 preset driving information in accordance with an  
operation of said operation means.

37. A device according to claim 36, wherein the  
preset driving information stored in said memory means  
25 includes information representing any one of a driving  
direction, driving velocity, and driving position of  
said optical member.